SEPTEMBER 1946

FIREMEN

FIFTIETH ANNIVERSARY YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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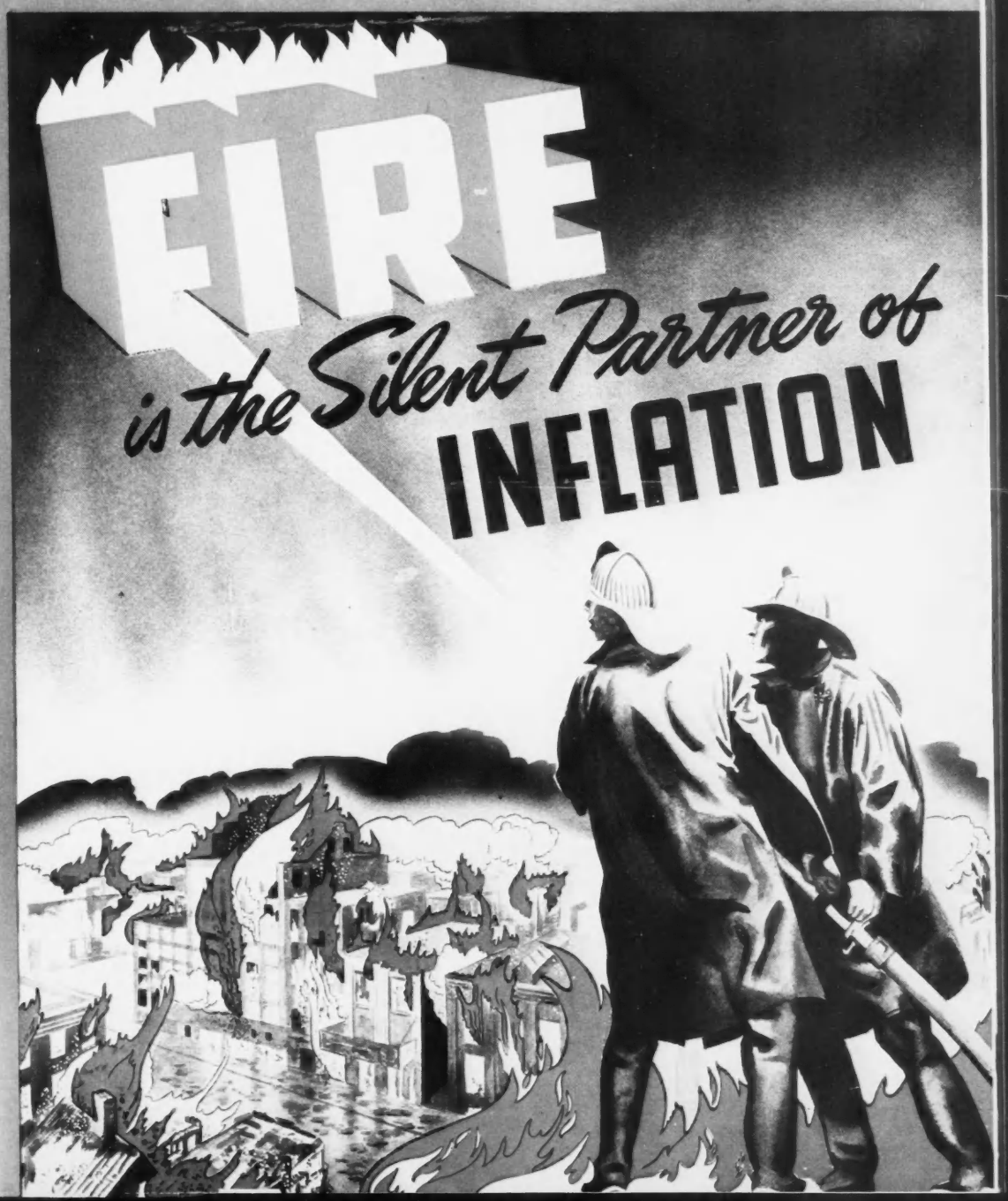
FIRE PREVENTION WEEK - OCT. 6-12



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2. Fire Department	1500
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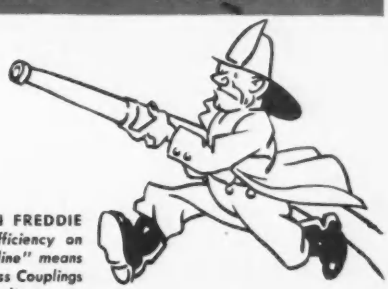

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Firemen

Volume 13 Number 9

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Published monthly for the fire service members of the

NATIONAL FIRE PROTECTION ASSOCIATION

60 BATTERYMARCH ST., BOSTON 10, MASS.
A VOLUNTARY NON-PROFIT ORGANIZATION

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THROUGHOUT the states this year, fire school officials have with one voice exclaimed, "The men at this fire school have a new spirit and enthusiasm that we have never had at a fire school before. There are no longer groups sitting on the sidelines grousing, but every man is right in there pitching all the way."

What are the reasons for this?. No doubt one is that the fire schools themselves have come of age. There are better programs, more nearly giving the men what they need and want in the way of training. For example, at the Eighth Annual Pennsylvania Fire School at Lewistown last month, the school's motto was "Fire Training through Fire Fighting." There was no more looking on and listening to lectures. The school was broken into sixteen groups or classes studying in rotation sixteen fire fighting and rescue jobs. Before the end of the week, every man had actually done every one of the jobs. He had put out an auto fire. He had put out an actual airplane fire. He had put out a large oil fire with fog and with foam equipment, and many other jobs. This year's program at Pennsylvania is only the beginning of more interesting fire schools already being planned for future years.

Another reason for better fire schools is that the firemen's organizations are getting behind the schools as never before. Good fire schools require money, if training centers and facilities are to be available on an adequate scale. Most firemen's organizations are in position to give powerful support to their state or provincial fire school program.

The fire service has emerged from the war with an appreciation of the importance of fire training, not evidenced before the world experienced a war of fire. Thus, adequate fire training has become one of the foundations of any platform for an improved fire service.

EVERY fire department has the job of selling its services to the public. This task goes on day and night as the fire department carries out its routine functions of fire prevention inspection and its more spectacular functions of responding to alarms and battling against flames. Occasionally, however, the fire department is faced with the problem of getting public backing and financial aid in order to improve its equipment and operations. At such times it must be ready to present its case directly to the voters or to the officials holding the municipal purse strings. One member fire department wrote, "We are going to put on the November election a proposal asking permission to raise the taxes two mills for three years for the sole purpose of building a modern fire station to properly house our present and future fire fighting equipment. We would like any literature that we could use to point out to the people the necessity of having a modern fire department able to render the utmost in fire protection."

As most firemen are aware, a mill is a tenth part of one copper cent erroneously called a penny. It is an amount so small that there is no U. S. coin minted to express that value. Like many other small things, the mill is of considerable importance when applied as a rate against thousands of dollars of taxable property. As a thousandth part of a dollar, a two-mill tax increase would bring a $2 increase on each thousand dollars of assessed valuation.

In our answer to this plea for information stressing the importance of fire protection, we have pointed out that in most communities the need for increased fire protection is based upon the present difficulty in replacing burned property. Due to the shortage of structural materials, increased valuations have raised the stake the average citizen may lose in a potential fire. Many fire departments can point to large losses that might have been minimized had their former pleas for adequate financial support been heeded.

Most important of all, the chief reason for good fire protection is to safeguard human life against destruction by uncontrolled fire. This is the first purpose of our fire protection organizations. With this foremost in mind when we ask for adequate financial support for our department, there should be few persons willing to gamble two one-thousandth parts of a dollar against the fire department's judgment as to what constitutes adequate fire protection for the community. Who can balance the cost of necessary fire department equipment and facilities against the value of a single human life?

If other fire departments have had interesting experiences in campaigns to have the fire protection tax increased, the Editors of FIREMEN would be interested in having this information to pass along to fire departments facing this problem.

Medford, Ore. Barely Escapes Destruction in $1,000,000 Fire

Portions of three city blocks destroyed as blaze swept fruit packing plants, paper and feed warehouse, millworking plant, lumber storage, buildings, and smaller properties.

AT 6 P.M. on the evening of June 25, two employees of the American Fruit Growers plant in Medford, Ore., remained in the building. One of them was living in the plant, due to the housing shortage. The other was a youth employed for clean-up work. Following custom, the former left his office to check the building. He encountered a wisp of smoke at the main stairway leading to the first floor. There was no evidence of fire, but he ran downstairs to the office and unsuccessfully attempted to telephone the fire department. (All alarms in the city of Medford are reported by telephone.) Endeavoring to phone from the second floor, he found the stairwell full of flame.

He called the clean-up boy to summon the fire department while he immediately attacked the fire with a 2-inch standpipe hose. The boy, phoning from the second floor, received a busy signal and was almost trapped by rapidly spreading flame as he waited for the line to clear. He was compelled to leave by a window.

Chief Roy Elliott believed that the fire may have been smoldering for hours in a storeroom before breaking out. The cause of the fire has not been determined. It is known that, fanned by a heavy north wind, the fire spread rapidly through the 2-story frame structure and the flames were well beyond control when the five paid firemen on duty arrived with two large-capacity pumpers.

The fire in the packing plant fed upon large quantities of orchard spray, insecticides, and wrapping materials and spread to wooden fruit boxes stacked inside and outside the building. Next the flames leaped the 60-foot street to involve the 2-story reinforced concrete plant of the Monarch Feed and Seed Company. Fire entered the plant through louvers, wooden doors, and melted wire glass windows in the north wall of the structure. Twenty minutes after the fire was discovered, this building was completely involved, but firemen, aided by the concrete walls of the seed plant and shift in the wind, prevented farther southward spread of the flames.

The shift in the wind which protected properties to the south caused the fire to jump across Fir Street and involve the retail yard of the Porter Lumber Company and the adjoining Medford Millwork Company, a lumber processing plant, which together occupied an entire block.

Fire also spread northward and involved the Crystal Springs Packing Company's one-story frame plant forty-four feet away. Fire fighting operations in this area were complicated by the fact that stacks of fruit boxes, awaiting the harvesting of the season's crop, completely filled this space, except for a six-foot lane. The fire again crossed Tenth Street, destroying a frame garage. A row of frame dwellings facing east on Grape Street was seriously threatened for forty-five minutes, but the fire fighters made a determined stand at this point. They were aided by a row of shade trees

Shanule Studio — Medford

Air View of Conflagration in business district of Medford, Ore., photograph taken looking south over Grape and Fir Streets showing progress of fire across the latter street. Fir street runs through center of fire area as shown on the map on page 7.

which absorbed some of the heat and stopped extension of the fire. The fire was under control by 7:30 P.M.

AT the time the fire occurred, the temperature stood at 71 degrees and had dropped to 65 degrees by the time the fire was extinguished. Humidity, which was down to 36 percent at 5:27, rose to 42 percent by 7:25 P.M. These humidity figures were somewhat lower than average for that locality. Wind velocities varied from 16, at the start of the fire, to 12 miles per hour at the end of the fire. It was reported that a thermal draft created by the fire developed an eddy of enough size to account for the switch in the wind direction, mentioned earlier as a major factor in the fire spread.

The Medford Fire Department consists of thirteen paid men, including the chief, operating on the 2-platoon system. Fourteen call men respond to the station at the sound of the fire siren. Their equipment consists of a 22-year-old 1200 g.p.m. pumper; a new 1000 g.p.m. pumper; an old 600 g.p.m. pumper; an old hose truck carrying a 500 g.p.m. OCD skid pump; and a small chemical truck carrying a second 500 g.p.m. OCD skid pump. There is also a small brush fire truck.

The first alarm was given by an employee of a transfer company when he saw flames shooting from the Fruit Growers plant a block away. Chief Elliott responded immediately with the two largest pumpers. With the arrival of the call men, two of the smaller pumpers went to the fire.

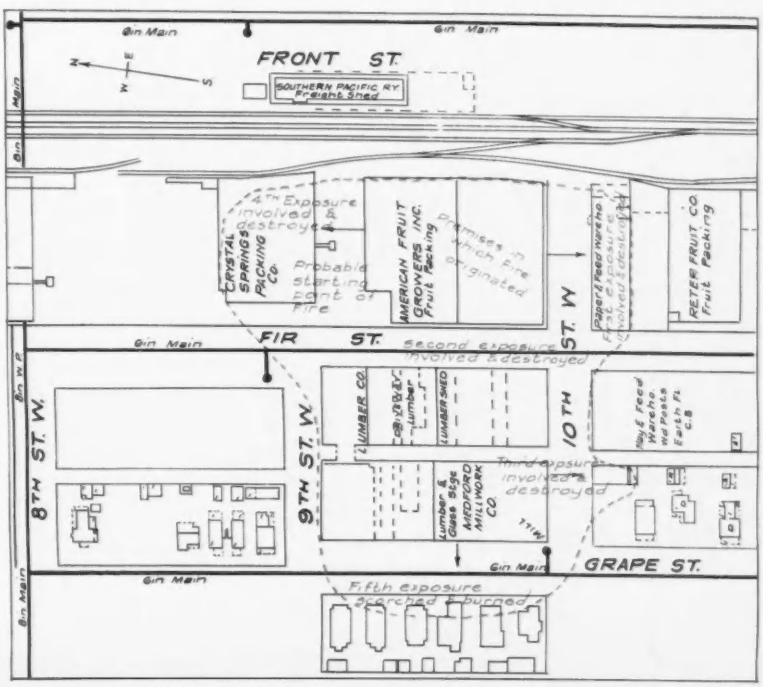
At 6:30 help was called from Ashland, twelve miles off, and from Camp White and the Medford airport, both five miles to the north, Ashland was quickly on hand with a 500 g.p.m. pumper and three men. Camp White sent two 500 g.p.m. pumpers, each manned by four paid firemen. The private fire brigade of a large timber plant in Medford dispatched a 500 g.p.m. OCD trailer pump manned by employees trained by the local department. The 500 g.p.m. pumper at the airport was delayed in response until clearance could be obtained from the base commander. A total of seven pumpers supplied twelve hose lines, the longest of which was 2000 feet. One hundred thirty-seven men, including firemen, former firemen, and state guard personnel, fought the fire, using 10,000 feet of 2½-inch hose.

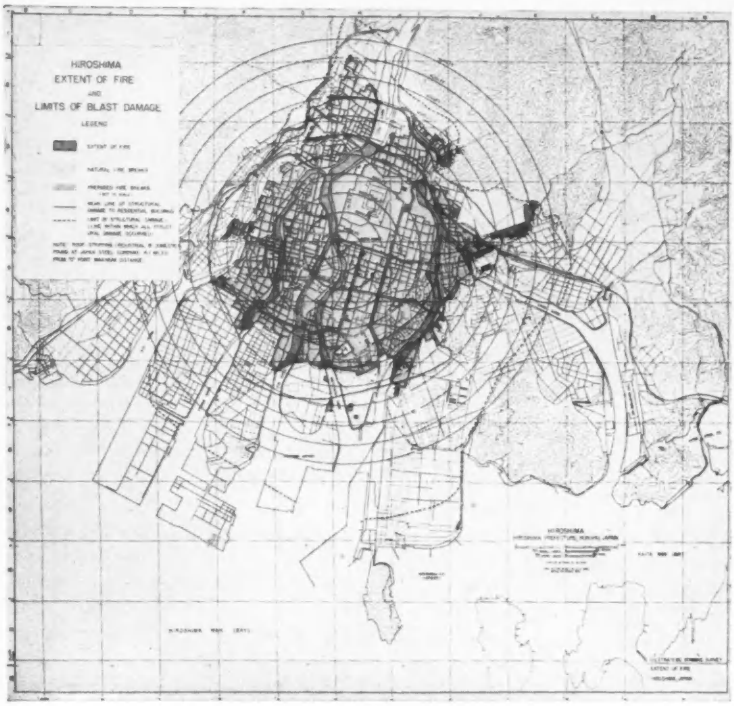
The water supply in the fire area was provided by a grid of 6- and 8-inch mains, although hydrant spacing was wide enough to necessitate a number of long lines. Hydrant pressure started at sixty-five pounds and increased to eighty-five pounds, then tapered off to an average of seventy as the pumpers increased their draft. It was estimated that 500,000 gallons of water were thrown on the fire..

It is interesting that this $1,000,000 loss was an indirect result of wartime curbs on building facilities. The original plans for the American Fruit Growers building in which the fire started included an automatic sprinkler system, but scarcity of materials in the summer of 1944 when the plant was built resulted in the elimination of the desired sprinkler protection. It is considered probable, if not certain, that an automatic sprinkler system would have held the fire to its point of origin, had it been installed. Without sprinkler protection, this huge frame building, housing large amounts of combustible materials, and undivided by fire walls, made an exposure problem beyond the facilities of the local fire department, particularly due to the delayed alarm. There is no report of the use of heavy stream devices, such as are so necessary in the control of large fires involving serious exposure problems.

Shangle Studio — Medford

View of the Medford, Ore., conflagration looking eastward. This shows the latter stage of the fire while fire fighters were battling to save dwellings in the foreground. Although these buildings were damaged, the fire was stopped at this point.


6in Main
FRONT ST.
SOUTHERN PACIFIC RY. Freight Shed
4th Exposure involved & destroyed
CRYSTAL SPRINGS PACKING Co.
Probable starting point of Fire
AMERICAN FRUIT GROWERS INC. Fruit Packing
Premises in which fire originated
Paper & Feed Warehouse 1st exposure involved & destroyed
RETER FRUIT CO. Fruit Packing
FIR ST.
Second exposure involved & destroyed
8TH ST. W.
9TH ST. W.
10TH ST. W.
LUMBER CO.
LUMBER SHED
Lumber & Glass Bldg.
MEDFORD MILLWORK CO
Third exposure involved & destroyed
GRAPE ST.
Fifth exposure Scorched & burned



THE FIRE AREA AT HIROSHIMA

The dark shaded area indicates the extent of fire destruction resulting from the atomic bomb attack. Circles mark 1,000-foot intervals from "ground zero."

HOW THE ATOMIC BOMBS WORK

The Fires, Loss of Life and Other Destruction as Revealed by Extracts from the Report by the U. S. Strategic Bombing Survey on the Effects of the Atomic Bombs on Hiroshima and Nagasaki.

A SINGLE atomic bomb, the first weapon of its type ever used on a target, exploded over the city of Hiroshima at 8:15 on the morning of August 6, 1945.

Practically the entire built-up portion of the city was leveled by blast and swept by fire. A "fire storm," a phenomenon which had occurred infrequently in other conflagrations, developed in Hiroshima: fires springing up almost simultaneously over the wide, flat area around the center of the city drew in air from all directions. The fire wind and the symmetry of the built-up center of the city gave a roughly circular shape to the four and one-quarter square miles which were almost completely burned out.

The surprise, the collapse of many buildings, and the conflagration contributed to an unprecedented casualty rate. Seventy to eighty thousand people were killed, or missing and presumed dead, and an equal number were injured. The magnitude of casualties is set in relief by comparison with the Tokyo fire raid of March 9–10, 1945, in which, though nearly sixteen square miles were destroyed, the number killed was no larger and fewer people were injured.

At Nagasaki, three days later, the city was scarcely more prepared, though vague references to the Hiroshima disaster had appeared in the newspaper of August 8. The bomb was dropped at 11:02 A.M., and the raid signal was given a few minutes later.

In Nagasaki, no fire storm arose, and the uneven terrain of the city confined the maximum intensity of damage to the valley over which the bomb exploded. The area of nearly complete devastation was thus much smaller: only about one and one-eighth square miles. Casualties were lower, also; between 35,000 and 60,000 were killed, and about the same number injured.

In Hiroshima (and in Nagasaki, also) the dwellings were of wood construction; about one-half were one-story and the remainder either one and one-half or two stories. The roof coverings were mostly hard-burnt black tile. There were no masonry division walls, and large groups of dwellings clustered together. The type of construction, coupled with antiquated fire fighting equipment and inadequately trained personnel, afforded, even in peacetime, a high possibility of conflagration.

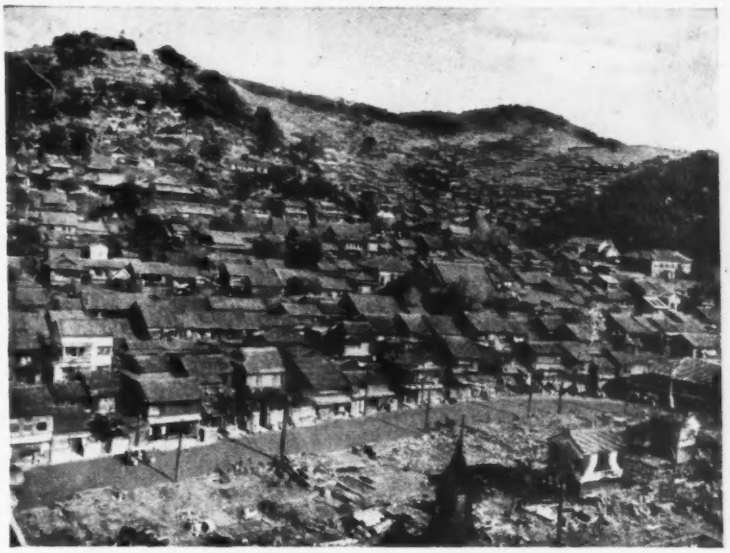
Only sixteen pieces of fire fighting equipment were available for fighting the conflagration, three of them borrowed. However, it is unlikely that any public fire department in the world, even without damage to equipment or casualties to personnel, could have prevented the development of a conflagration in Hiroshima, or com-

NAGASAKI—BEFORE

The area around "ground zero."

bated it with success at more than a few locations along its perimeter. The total fire damage would not have been much different.

While the conflagration with its uniformly burnt-out area caught the attention at Hiroshima, the blast effects, with their resemblance to the aftermath of a hurricane, were most striking at Nagasaki. Concrete buildings whose sides faced the blasts were stove in like boxes. Long lines of steel-framed factory sheds, over a mile from ground zero, leaned their skeletons away from the explosion. (For convenience, the term "ground zero" will be used to designate the point on the ground directly beneath the point of detonation, or "air zero.") Blast-resistant objects like telephone poles leaned away from the center of the explosion; on the surrounding hills trees were blown down within considerable areas. Although there was no general conflagration, fire contributed to the total damage in nearly all concrete structures. Evidence of primary fire was more frequent than at Hiroshima.



SHIELDED RESIDENTIAL AREA—NAGASAKI

This congested residential area survived because it was shielded by hills. The space in the foreground is a fire break, cleared before the attack.

Casualties

Most of the immediate casualties did not differ from those caused by incendiary or high explosive raids. The outstanding difference was the presence of radiation effects which became unmistakable about a week after the bombing.

A plausible estimate of the importance of the various causes of death would range as follows:

Flash burns	20 to 30 percent
Other injuries	50 to 60 percent
Radiation sickness	15 to 20 percent

The flash of the explosion, which was extremely brief, emitted radiant heat traveling at the speed of light. Flash burns thus followed the explosion instantaneously. Peak temperatures lasted only momentarily. Survivors in the two cities who were in the open directly under the explosion of the bomb were so severely burned that the skin was charred dark brown or black and that they died within a few minutes or hours.

The number of burns from secondary fires was slight among survivors, but it was probable that a large number of the deaths in both cities came from the burning of people caught in buildings. There are no references to people in the streets succumbing either to heat or to carbon monoxide as they did in Tokyo or in Hamburg. A few burns resulted from clothing set afire by the flash wave, but in most cases people were able to beat out such fires without serious injury to the skin.

The radiation effects upon survivors resulted from the gamma rays liberated by the fission process, rather than from induced radio-activity or the lingering radio-activity of deposits of primary fission products. The effects of gamma rays are here used in a general sense to include all penetrating high-frequency radiation and neutrons that caused injury.

According to the Japanese, those individuals very near the center of the explosion, but not affected by flash burns or secondary injuries, became ill within two or three days. The majority of the radiation cases who were at great distances did not show severe symptoms until one to four weeks after the explosion, though many felt weak and listless the following day. Deaths from radiation began about a week after exposure and reached a peak in three to four weeks.

There is reason to believe that if the effects of blast and fire had been entirely absent from the bombing, the number of deaths among people within a radius of one-half mile from ground

Continued on page 21

NAGASAKI—AFTER

The area around "ground zero."

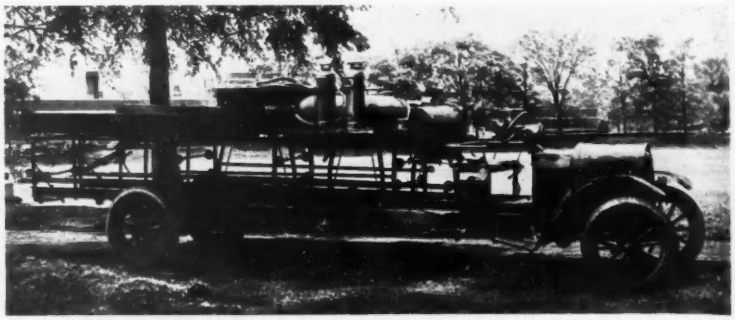
"Glad It Didn't Happen at Night!"

INADEQUATE fire fighting equipment, lack of sprinkler protection, and odd-sized hydrant openings were contributing factors in the near-tragic fire that destroyed the annex at Western State Insane Asylum, Bolivar, Tenn., on April 9. The asylum houses some 2,300 negro patients.

About 9:30 in the morning, fire apparently started in a food elevator in the central part of the building. The only piece of fire fighting equipment on the grounds was a 1918 Model T Ford truck with two chemical tanks, hose and ladders. Western State had its own water system and a standpipe which could furnish a fairly high pressure but there were only 4-inch water mains and a few hydrants from which to draw.

The fire departments at Bolivar, two miles away, and Jackson, twenty-eight miles away, were both called, but the Jackson department did not respond as they were told that the non-standard hydrants on the hospital grounds could not be used. Firemen from Bolivar arrived with a hose wagon and ladders. Their hose lines did fit the outlets, and no pumper was available. Several low pressure lines were put into operation, and all but one of them burst a few minutes after.

The north wing, or annex, in which the fire originated was built in 1889. It was a rambling, two-story structure, one of seven brick-walled buildings on the hospital grounds. Hope of saving



↑Above. This was what the state provided in the way of mobile fire protection at Western State Insane Asylum, two miles from the nearest fire department. Model T Ford combination hose, ladder, and chemical truck.

←Left. Fire fighters managed to drag a few mattresses and iron beds from the burning wing. Space shortage at the asylum was made more acute as the 400 bedless patients were crowded into other already over-filled wards. One building with a capacity for 400 housed 750 patients.

←Left. This was what remained of the north wing of the state asylum after fire, starting at a dumb waiter shaft, roared through the structure.

Right. This interior view of the two-story dormitory shows how completely the fire swept through unprotected wall openings. Fortunately the fire gained momentum slowly and the 400 Negro patients were all led to safety. →

←Left. Brick walls do not a fire-resistive institution make, as shown by this picture after the fire had completely destroyed the combustible interior.

the building was slim, and the firemen turned their efforts toward saving endangered buildings.

By some miracle, the 400 negro patients were safely evacuated from the 57-year-old building. Dr. David Gallaway, superintendent of the asylum, was quoted as stating that he was "glad it didn't happen at night." Space shortage at the hospital was made more acute than before.

According to newspaper accounts, officials reportedly admitted that the state had been warned that disastrous fires were a possibility with the poor protection maintained at such state institutions. Plans to install sprinkler systems in several buildings, at the Western State Insane Asylum, did not include the burned structure as it had been condemned and was to be replaced. It was also said that a new fire truck had been ordered by the city of Bolivar.

Damages were estimated at $350,000.

* * *

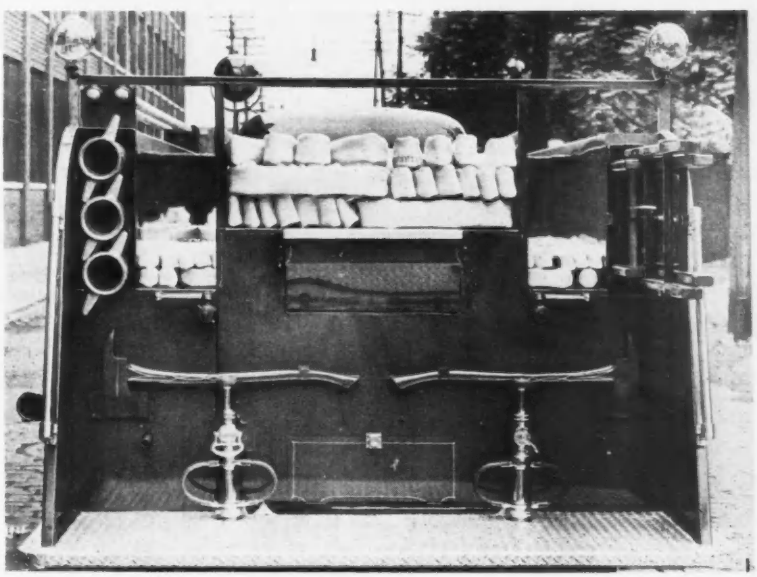
Fire Protection Expenditure for Nation's 14 Largest Cities

THE total general expenditures of the fourteen largest cities of the United States — those of 500,000 population and over — amounted to $1,459,053,000 in the 1944 fiscal year, according to the Bureau of the Census. These cities spent nearly twice as much for police protection as for fire protection. More than 10 per cent, or $150,150,000, of the total cost of big city government was spent on police protection. Only 5 per cent, or $85,545,000, of the total went toward municipal fire protection.

The following table compares the cost of fire protection with the populations of the United States fourteen largest cities.

City	*Population*	*Expenditure for Fire Protection*
New York	7,454,995	$31,693,000
Chicago	3,396,808	9,629,000
Philadelphia	1,931,334	6,295,000
Detroit	1,623,452	5,762,000
Los Angeles	1,504,277	5,718,000
Cleveland	878,336	2,763,000
Baltimore	859,100	3,802,000
St. Louis	816,048	2,232,000
Boston	770,816	3,895,000
Pittsburgh	671,659	2,478,000
Washington	663,091	2,616,000
San Francisco	634,536	3,985,000
Milwaukee	587,472	2,298,000
Buffalo	575,901	2,379,000

The Answer to the High Pressure vs. Large-Capacity Pump Problem?



THE answer to the problem as to whether the new rural fire truck should be a high pressure unit supplied by water tank, or a large-capacity standard pumper, was solved by the Portland, Mich., volunteer firemen by purchasing a machine having both a 500 g.p.m. centrifugal pump and a separate high pressure pump supplying two reels of high pressure hose.

Under the 1,000-foot load of 2½-inch hose, the truck carries a 400-gallon tank with a quick-fill opening at the rear to permit refill of the tank from milk cans or water pails. At the left of the hose body in an enclosed compartment are three lengths of hard suction and at the right is a compartment containing extension and roof ladders.

Between these compartments and the hose bed are compartments for 1½-inch leader lines. Directly below the lines are 1½-inch gated outlets from the pump. The regular 2½-inch pumper intakes and outlets are behind the panels amidships. The high pressure hose reels are enclosed on either side near the rear step. The high pressure pump is located in the pump compartment at the front of the body above the centrifugal 500 g.p.m. pump.

As may be observed, all controls, gauges, and equipment are fully enclosed and a tarpaulin cover is provided over the hose load. The apparatus carries a full complement of small tools and equipment, including salvage covers, stretchers, oxygen masks, pump tank extinguishers, foam extinguishers, and fog nozzles.

The apparatus, fully loaded with water and carrying six men, weighs 17,700 pounds. It cost about $9,800.

FIRE PREVENTION WEEK — OCTOBER 6-12

PROMOTION

1 Town Plaster — Red, and Black. 3½ x 12. For posting on store windows, billboards, vehicles, etc.

4 Picture Book — Red and Black. 16 pages of outline drawings of fire hazards for coloring by children.

2 Flyer — Red and Black 5½ x 8½. A colorful envelope stuffer.

3 Community Poster — Red and Black, 12 x 16

5 Quiz — Red and Black. A four-page fire quiz, illustrated with correct answers.

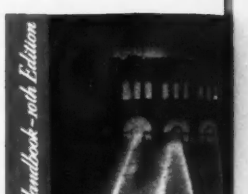
6 Pamphlet — "Facts About Fire." Discussions and statistics on fire Of great value to speakers, editors, and writers.

NATIONAL FIRE NEWS
FIRE PREVENTION WEEK TO BE CELEBRATED HERE OCT. 6-12
President Truman, Governor and Local Officials Urge Citizens to Join in War Against Fire
Expert Blames Public Apathy For Fire Tragedies

7 House Organ — Localized, four-page, tabloid newspaper. Red and Black, 11⅜ x 17¼

8 Folders — In several colors. Each is 6¼ x 3¼. For including in letters, home distribution, etc.

9



9 Fire Prevention Week Handbook — Complete plans for a successful campaign.

HERE'S YOUR ORDER BLANK

Quantity

Order early to forestall transportation delays — Orders received after September 28 cannot be accepted.

_____ 1. Town plaster — $1.00 per 100, $6.00 per 1000.
_____ 2. Flyer — $1.00 per 100, $7.00 per 1000.
_____ 3. Community poster — $2.25 per 100, $17.50 per 1000.
_____ 4. Picture Book — $.05 each, $4.50 per 100, $40.00 per 1000.
_____ 5. Quiz — $1.50 per 100, $12.50 per 1000.
_____ 6. "Facts About Fire" — $.05 each, $4.00 per 100.
_____ 7. House Organ — $1.50 per 100, $10.00 per 1000.

_____ 8(a). Folder — $1.50 per 100, $12.50 per 1000.
_____ 8(b). Folder — $1.50 per 100, $10.00 per 1000.
_____ 8(c). Folder — $1.50 per 100, $12.50 per 1000.
_____ 8(d). Folder — $1.50 per 100, $10.00 per 1000.
_____ 8(e). Folder — $1.50 per 100, $12.50 per 1000.
_____ 8(f). Folder — $1.50 per 100, $10.00 per 1000.
_____ 8(g). Folder — $1.50 per 100, $12.50 per 1000.
_____ 9. Handbook — $.15 each.

YOUR NAME AND ORGANIZATION REPRESENTED _____

ADDRESS _____ CITY AND STATE _____

Prices subject to 2% discount if payment accompanies order. All prices F.O.B. Boston. Orders shipped express collect; small orders parcel post prepaid. N.F.P.A. members may receive single copy of all items gratis. Others may receive sample of all items except "Handbook" and "Facts About Fire" free on request. Items Nos 2, 3, 4, 7, 8(a), 8(b), 8(c), 8(d), 8(e) 8(f), 8(g) have space for imprints of names of campaign sponsors or other local messages added as desired by purchaser. Imprinting done by N.F.P.A. subject to extra charges and delay.

NATIONAL FIRE PROTECTION ASSOCIATION, 60 Batterymarch Street, Boston 10, Massachusetts

Plans Under Way for Fire Prevention Week

1946 MARKS the seventy-fifth anniversary of that fateful day in 1871 when Mrs. O'Leary's cow kicked over the lantern and started the $168,000,000 Chicago conflagration.

Since 1900 some 22,000,000 fires have devastated these United States . . . fatally burning 450,000 people (nearly twice the number of Americans killed in all World War II's bloody battles) . . . 675,000 have been burned or disfigured for life by fire and $15,000,000,000 worth of property has gone up in smoke. Nearly 50 percent of the estimated $33,000,000,000 damage meted out to Axis cities during the past war has been caused right here in our own back yard since the turn of the century. There is little difference between destruction wrought by buzz bombs, atomic bombs or by careless fire — one is just a little quicker than the other.

President Truman, the governors of the several states and the Governor General of Canada will designate the week of October 6–12 as Fire Prevention Week this year. Fire Prevention Week offers the fire department an opportunity to enlist the public in the war against fire on a year-round basis.

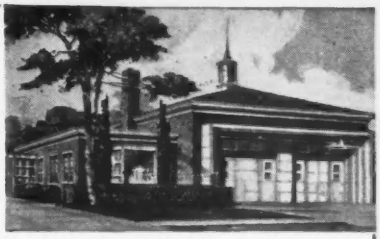
In the face of fire losses which are at a 16-year high, the 1946 campaign takes on added significance to a nation striving to break the reconversion and housing bottleneck. Fire is the silent partner of inflation.

An attractive array of promotional material has been prepared as tools for the 1946 campaign. These are pictured on the opposite page and sample copies of all items are gratis to NFPA members and campaign sponsors.

The importance of ordering your Fire Prevention Week materials early cannot be overemphasized. A selected list of sample fire prevention week publications have already been sent with the NFPA *News Letter* to all member fire departments. Orders will be filled and shipped without delay, but transportation tieups can upset your plans unless supplies are ordered well in advance. We cannot, therefore, undertake to fill orders received after September 28. Because of the saving of time and effort in the accounting department, a discount of 2 percent may be taken if payment accompanies the order.

Better FIRE STATIONS *with* CIRCUL-AIR

THE AIR-CONDITIONING



FIRE HOSE DRYER

We're sure you want your new stations to be of **Modern Design**, simpler . . . streamlined houses in keeping with the times . . . with better lighting, heating, adequate alarm systems, finer apparatus and **FASTER HOSE DRYING.** In eliminating the costly, ugly hose tower of the "gay 90's" **CIRCUL-AIR** improves building appearance and lowers construction cost. Efficient and practical for large central stations, they are ideal for "bungalow" type houses, for villages, townships and fire districts where time-saving, space and costs are decisive factors.

BETTER HOSE DRYING *for* OLD STATIONS *too!*

Without adequate drying equipment, or with towers in need of repairs they are most economical and efficient. Cheaper than a tower, more compact than a drying rack, faster and easier to use than either.

ASK A CHIEF WHO HAS ONE

Or Write for Descriptive Booklet

The CIRCUL-AIR Corporation

NEW ADDRESS

575 E. Milwaukee St. -:- Detroit 2

FEDERAL ELECTRIC COMPANY, INC.

SIREN HEADQUARTERS

How **POWER** *is built into this* **FEDERAL** *Traffik-King* **SIREN**

Oscillating Red Light; Single or Double Tone; Coaster Model

The tremendously powerful tone of Federal Traffik-King sirens demands attention over other traffic noises, clears the way. This model has a distinctive double tone; and it coasts almost two minutes after current is off. Special clutch mechanism releases rotor; coasts much longer than so-called "long roll" types, which seldom roll over 30 seconds. Electric solenoid brake on rotor stops sound instantly. Durably built for long, dependable, maintenance-free service.

Rotors: cast aluminum, precision-machined, individually balanced. Thin, smooth blades for high efficiency.

Ports in rotor and stator accurately spaced, finished to square sharp edge; assure true pitch, powerful tone.

Motors: heavy duty; bronze or ball bearing; 6 or 12 volts.

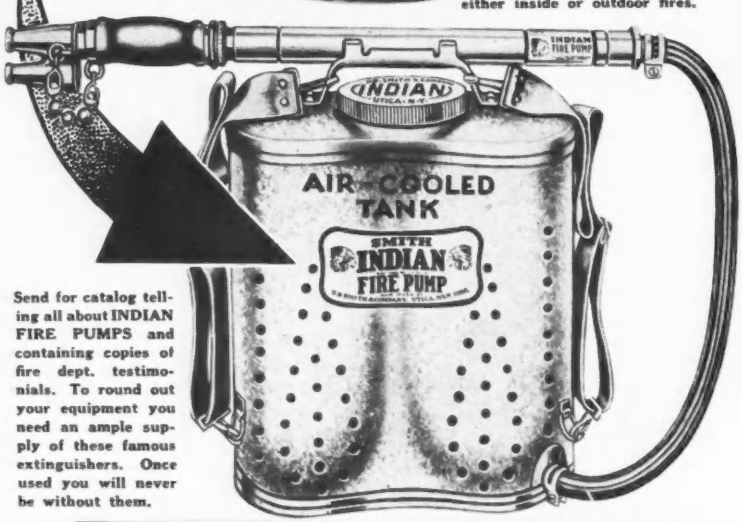
WRITE for FREE BULLETINS

Details, illustrations, prices, on this and other FEDERAL Sirens

8717 SOUTH STATE ST., CHICAGO 19, ILL.

INDIAN FIRE PUMPS ARE THE FIREMEN'S BEST FRIEND!

Using only clear water and portable on the back, INDIAN FIRE PUMPS have won the high esteem of firemen all over the U. S. They are the fastest, most economical way to put out over 70% of all your calls... either inside or outdoor fires.



Send for catalog telling all about INDIAN FIRE PUMPS and containing copies of fire dept. testimonials. To round out your equipment you need an ample supply of these famous extinguishers. Once used you will never be without them.

D. B. SMITH & CO., 411 Main St., UTICA, N.Y.

Pacific Coast Agents

Hercules Equipment & Rubber Co. 343 Brannan St., San Francisco, Cal.
Mill & Mine Supply Co. 2700 4th Ave. So., Seattle, Wash.
Bingham & Hobbs Equip. Co. Ltd. 395 W. 5th Ave., Vancouver, B. C.
Fred E. Barnett Co. 2005 S.E. 8th Ave., Portland, Oregon
Fred E Barnett Co. 600 Spring St., Klamath Falls, Ore.
Fred E. Barnett Co. Broadway and Harris St., Eureka, Cal.
Roy G. Davis Co. 617 E. 3rd St., Los Angeles, Cal.

Canadian Agents

Duke Equipment Co. 297 Duke St., Montreal, Que.

School Fire Drills

SEPTEMBER and the annual back-to-school trek means also a renewal of vigilance where school fire safety is concerned. With students, and in many cases their teachers, new to a classroom or school building, it is very necessary that principal and fire chief cooperate in fire drill practice.

The following school fire drill instructions are sent to all the chiefs in Nassau County, suggesting that they visit their local principal and study them with him.

1. Gongs must be heard in *all* parts of the building.
2. *No one* should have any advance notice of a fire drill.
3. Every fire drill should be regarded as a real fire.
4. Teachers should leave the building with their classes.
5. *Every* occupant should respond and leave the building.
6. Smaller children leave first.
7. Someone should be delegated to visit restrooms and cloakrooms to see that all are out.
8. Provisions should be made for assisting crippled children.
9. After leaving the building, teachers should check to see that all pupils are accounted for.
10. Monitors should be appointed from rooms near exits to hold or block doors open.
11. Talking should not be permitted during drills so that orders or directions may be heard.
12. Pupils should move quickly but without running or confusion. Emphasis should be placed on order and discipline rather than speed.
13. Pupils should be conducted to a point sufficiently far from the building so they will be safe and out of the way of fire apparatus.
14. Teachers must remain calm, even in an actual fire, and younger children watched to avoid possible running around or panic.
15. Pupils should return to the building in the same order they vacated.
16. After perfecting a regular drill system, it is desirable to conduct obstructed drills by stationing a person at an exit to tell teachers to use alternate exits, as planned in advance.
17. Janitors should report to fire stations.
18. Plans should also cover alarms sounded while pupils are changing classrooms and in assemblies.
19. No one should stop for hats or coats when alarm sounds.

CLOUDY

CHICAGO DAILY NEWS

MARKETS 5 STAR FINAL

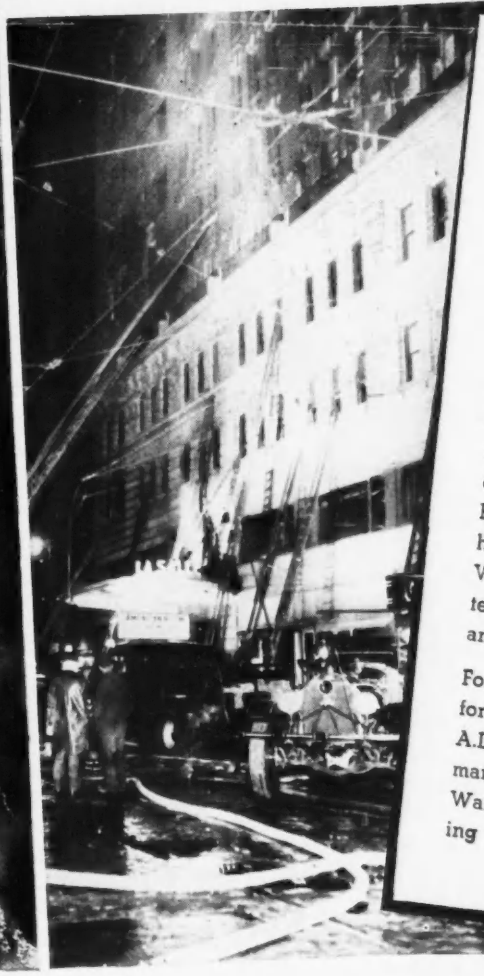
71ST YEAR—133. THURSDAY, JUNE 6, 1946—FORTY-FOUR PAGES. FIVE CENTS

Witnesses' Story of La Salle Tragedy

DELAY IN REPORTING FIRE TOLD

20 Minutes Lost, Employee Charges

Reveal Blast
Followed Blaze



Heavy loss of life in the recent tragic hotel disasters at Chicago and Dubuque dramatically illustrates the prime importance of those vital first few minutes when, in most cases, the flames can be easily and quickly controlled.

Well-protected hotels are equipped throughout with A.D.T. Manual Fire Alarm Systems with private fire alarm stations, located in accordance with the regulations of the National Board of Fire Underwriters, for immediate notification of the fire department and sounding of appropriate interior alarms in case of fire. Watchmen, through their reporting stations, are under the constant supervision of A.D.T. central station operators. Basements, storerooms and all other out-of-the-way and hazardous areas are protected by A.D.T. Sprinkler Waterflow Alarm or Aero Automatic Fire Alarm Systems which automatically detect the outbreak of fire and summon fire fighting forces.

For the best in protection for lives and property write for complete information concerning the following A.D.T. Services: Manual Fire Alarm Service, Watchman's Reporting Service, Sprinkler Supervisory and Waterflow Alarm Service, Aero Automatic Fire Detecting and Alarm Service.

Controlled Companies of **AMERICAN DISTRICT TELEGRAPH CO.** *155 Sixth Ave., New York*
CENTRAL STATION OFFICES IN ALL PRINCIPAL CITIES OF THE UNITED STATES

A·D·T

Electric Protection Services
AGAINST FIRE · BURGLARY · HOLDUP
A NATION-WIDE ORGANIZATION

FIRE BRIGADE ...
... *modern style*

Visualize a C-O-Two Smoke Detecto and Fire Extinguishing System with the famous C-O-Two pressure-operated valves, pressure-operated releases to automatically close doors, windows and dampers, and a pressure-operated switch to shut off motors and ventilation. With this built-in C-O-Two automatic system you have a compact fire department that never moves from one spot. This is C-O-Two fire protection – modern method – engineered to protect vaults and storage rooms where valuable tracings and other valuable records are stored.

Smoke in a protected area is detected instantly by the new C-O-Two Industrial Smoke Detector. It is not dependent upon heat; smoke alone actuates the detector. Fire is discovered in its incipiency. The alarm sounds and a time-delay controls the discharge of dry, non-damaging, sub-zero carbon dioxide into the occupied area. The fire is under control.

C-O-Two automatic systems are also available for bake ovens, dip tanks, spray booths and electrical equipment. C-O-Two portables with the famous C-O-Two Squeez-Grip valve—wheeled and hose units—all employ carbon dioxide, the fastest non-damaging fire extinguishing agent. C-O-Two engineers are ready now to help you plan modern fire protection. Write today for details.

C-O-Two is listed by the Underwriters' Laboratories, fully approved by Factory Mutuals and the Bureau of Marine Inspection and Navigation. C-O-Two is a registered trade mark. To be safe, specify C-O-Two.

C-O-TWO

C-O-TWO FIRE EQUIPMENT COMPANY

NEWARK 1 NEW JERSEY

Sales and Service in the Principal Cities of U. S. and Canada

AFFILIATED WITH PYRENE MANUFACTURING COMPANY

Coming Events

September 3-6—Maryland Short Course at College Park.

September 6-8—New Hampshire training program for firemen at the University of New Hampshire, Durham.

September 9-14—Ohio State Fire School at the state university, Columbus.

September 15—Lake Erie Firemen's Assoc. in Berea, Ohio.

September 24-26—13th Annual Indiana State Fire School at Purdue University, Lafayette.

Iowa Plans for Itinerant Fire School Instruction to Use Gov't Surplus Apparatus

PLANS to acquire surplus government apparatus for use in itinerant fire department instruction were approved at the Iowa Firemen's Advisory Training Committee meeting at the state college, July 10. The committee hopes to secure a legislative appropriation specifically for firemen's training. Two fire fighting specialists would then devote their time to holding fire schools for departments all over Iowa.

The Committee advises that the purchase of such apparatus for the use of traveling instructors would be desirable for the following reasons:

1. College fire apparatus can be placed in fire service during the time municipal apparatus is used for training. In departments having but a single piece of equipment this is a major consideration.

2. The college trucks can be fitted and altered to specifically fit the needs of rural communities. The example of tangible evidence of modern practices and procedures should result in purchase of new apparatus and alteration of existing equipment more in keeping with present-day needs of small towns.

3. Practice evolutions in relaying water can be demonstrated without seriously tying up all available apparatus.

4. Fire apparatus can visit communities having none, or having obsolete equipment and stimulate interest in modernizing the fire department. There are some hand-drawn hose reels still in service in Iowa.

5. Interest of firemen in inactive departments can be stimulated by well-demonstrated evolutions designed to show the results to be realized by organized effort.

6. Regional schools could be held in cities possessing insufficient and inappropriate fire apparatus. The use of college fire apparatus would also overcome the objections of some cities against using their own trucks for instruction of firemen from outside towns.

* * *

Wm. R. Frutchey

At the recent New Jersey Fire Safety College, R. W. Black, chief safety engineer, Standard Oil Company of New Jersey, demonstrates the flash point of a flammable liquid. Left to right about the table are George W. Yemm, safety director, Clark Thread Company and chairman of the Newark Safety Council's Industrial Committee; W. R. Smith, chairman of the council's Fire Prevention Committee; Mr. Black; Leonard Fuchs, chairman of the Council's Fire College Committee; and S. C. Williams, Jr., assistant to the president of Pyrene Manufacturing Company and member of the council's Fire College Committee.

The New Jersey Fire Safety College was sponsored by the Newark Safety Council's Fire Prevention Committee with ten state organizations cooperating. The final session was held in May with a total of 587 persons completing the course with graduation certificates. Enrollment totaled 1,487.

FOR SALE

By the Edge Hill Fire Co., No. 1, Abington Township District No. 4, North Hills, Pa.

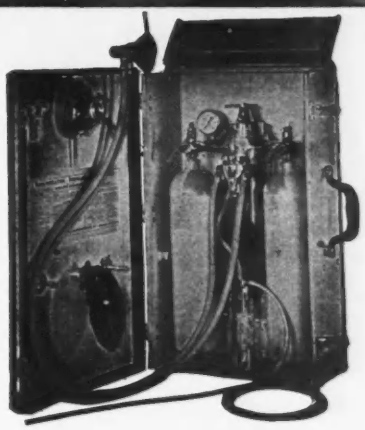
Hale, type 5 pumper, two-wheel booster brakes, dual pneumatic tires, 500 g.p.m. rotary pump, 100-gallon tank with one ¾-inch line, 1000 2½-inch hose body capacity. In good condition. **Price $1800.**

Hale, type 4 apparatus, two-wheel booster brakes, dual pneumatic tires, 100 g.p.m. rotary pump, 135-gallon tank with two ¾-inch hose lines in basket, 200 feet of 1½-inch hose body capacity, 800 feet of 2½-inch hose body capacity. In good condition. **Price $1200.**

WHEREVER YOU FIND LIFESAVING AT ITS BEST

You'll find

The E & J RESUSCITATOR INHALATOR and ASPIRATOR



There are important reasons why so many fire departments, hospitals and industrials have purchased additional E & J Resuscitators after successful experience with their first unit. These automatic breathing machines are built to include vital life saving features not found in other equipment. A comparison of other equipment and methods by your department will quickly reveal why the vast majority of fire departments have chosen the E & J. We invite your thorough investigation.

E & J MANUFACTURING CO.
GLENDALE, CALIFORNIA
Pioneers and Specialists in Mechanical Artificial Respiration

Drexel Bldg. Philadelphia | 17 E. 42nd St. New York | 2144 N. Springfield Ave. Chicago | 581 Boylston St. Boston
530 Fernando St Pittsburgh | 3032 W. 25th Ave. Denver | 3900 Grandy Ave. Detroit | 5005 Euclid Ave. Cleveland

TRADE MARK

MEARLFOAM

The all-climate, dependable mechanical foam extinguisher » » » *It flows—covers—seals—extinguishes* » » » Highly effective on oil and gasoline fires—on Class A fires » » » Use with any kind of water—at any temperature—in all makes of equipment.

Write for descriptive bulletin

FIRE OUT... Stays OUT!

THE MEARL CORPORATION
153 Waverly Place, New York 14, N. Y.

FIREMEN'S Rubber and Canvas CLOTHING

FROM Midwestern

This Midwestern Combination Suit, made of Vanitex, the modern waterproof fabric, is sold separately or together. The "Mackinaw Coat" is a highly serviceable garment with flexible elastic inner sleeves; adjustable collar strap, detachable wool lining, Midwestern safety snaps, two outside pockets, 6" storm flap and many other good features.

Hundreds in use All over America

Midwestern Bunker Pants with detachable wool lining, safety snap on adjustable belt, wide protecting flap, are sturdily constructed with reinforced crotch for pole sliding. Write today.

FIREMEN'S BOOTS
Regular Firemen's Boots, ¾ length, available now. We can also supply REGULAR Firemen's Boots, felt lined, reinforced instep. See your Midwestern Manufacturing Company dealer for prices or write the factory.

Mackinaw Coats are Manufactured by

MIDWESTERN MANUFACTURING CO.
MACKINAW, ILLINOIS

Chicago F. D. Chaplain Receives Monsignorial Robes

ON HIS elevation to Monsignor, the Right Reverend William J. Gorman was presented the purple Monsignorial robes by Commissioner Michael J. Corrigan on behalf of the firemen of the Chicago Fire Department.

Officially and unofficially chaplain of the department since 1922, Monsignor Gorman early won the hearts of Chicago's firemen of all faiths by his devotion to their human problems. For many years Monsignor Gorman has been available to all firemen for help in time of trouble whether family difficulties, pensions, schooling of orphans or sickness might be the problem. He grew up in Chicago, and is considered Chicago's most beloved fireman.

For many years Monsignor Gorman has responded to all second alarms and emergency calls from an alarm register installed in his rectory, and also from a two-way radio with which his car is equipped. Chicago's Fire Department, from its highest ranking officers to its last recruit, give Monsignor Gorman credit for having answered more multiple alarms than anyone in the department. High morale in the department is in large measure credited to Monsignor Gorman, whose presence on the fire or accident scene at any hour of the day or night assures Chicago firemen that should accidents occur their families are certain of Monsignor Gorman's comforting helpfulness.

Movies Available for FPWeek Showing

A 1-MINUTE, 35 mm. Fire Prevention Week film showing actual fire scenes is available with the name of the sponsoring organization added at a cost of $4.90 a print. The films also come in 16 mm. size. Write to Underwriters' Laboratories, Inc., 207 E. Ohio Street, Chicago. Checks or money orders should be made out to Filmack Corporation, producers.

(1) Two 4' x 5' open tanks each filled with 10 gallons of gasoline and gasoline-saturated wood piled 3½' high on top, set alight.

(2) Within 10 seconds nearer, part of fire is subdued.

(3) At end of 35 seconds, fire is extinguished.

(4) Operator with 25 GPM FIRE-SNUFFER NOZZLE.

StrangleAIR FOAM AND FIRE-SNUFFER NOZZLES

War-Proved Fire Extinguishing Agents Give You Faster and More Effective Fire Fighting

StrangleAIR FOAM will isolate, subdue and extinguish fires quickly and effectively. A coating will cling to any surface, horizontal or vertical, and last for hours, or until fire has been extinguished and danger of re-ignition removed. StrangleAIR is clean, white, odorless, non-toxic. It will not injure paint, woodwork, furniture or carpet. StrangleAIR prevents formation of noxious or dangerous fumes and eliminates flashbacks. Cut fire losses and give greater protection to fire fighter with StrangleAIR.

FIRE-SNUFFER NOZZLES, bright nickel finish with red trim, are easy to clean and easy to handle. These units are specially designed to deliver foam with uniform consistency. They are available in standard sizes from 2½ GPM to 250 GPM.

StrangleAIR FOAM and FIRE-SNUFFER NOZZLES can be obtained through fire appliance supply houses.

For prompt, complete information fill out coupon and mail today.

Please send me Illustrated Bulletin 251 G.

Name .....

Fire Dept. .....

Address .....

.....

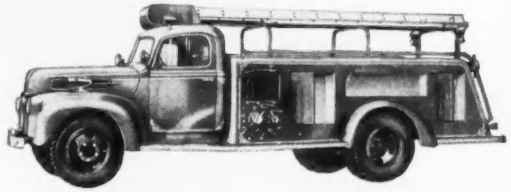
StrangleAIR FOAM · FIRE-SNUFFER NOZZLES

AMERICAN DIE & TOOL COMPANY, INC., East Reading, Pennsylvania

DARLEY 185 TYPE S500 PUMP

SPECIAL BOOSTER TANK FILLER DRAWER

The special filler drawer built into the rear of the 400 gallon booster tank is a new Champion engineering feature. Takes water faster than you can pour it. Shown in open position. Cutaway view of strainer to show the positive seal 4 inch shutoff valve. In closed position the filler drawer fits flush.



A custom body in every way with nothing skimped or saved in design, construction, materials, workmanship. Yet available at moderate cost.

Any Chief would take justifiable pride of ownership with this Champion in his Department.

And it's every bit as good as it looks.

Write for NEW Fire Apparatus Booklet

W. S. DARLEY & CO.

ESTABLISHED 1908 CHICAGO 12, ILL.

How the Atomic Bombs Work

Continued from page 9

zero would have been almost as great as the actual figures and the deaths among those within one mile would have been slightly less. The principal difference would have been in the time of the deaths. Instead of being killed outright as were most of the victims, they would have survived for a few days or even three or four weeks, only to die eventually of radiation disease.

These suppositions have vital importance, for actually in Nagasaki and Hiroshima many people who were protected by structures against blast and fire were not protected against the effect of gamma rays. The complexity of the problem of shelter protection has been increased by this necessity of shielding against radiant heat and gamma rays. Fortunately, earth and concrete will shield against gamma rays, the required thickness varying with the intensity of the rays.

How the Atomic Bomb Works

The atomic bomb works by explosion. As do ordinary high-explosives, atomic bombs release energy, though on an unprecedented scale. The energy takes three forms (one of which is new), and all the effects of the bomb can be referred directly to these three kinds of energy. They are:

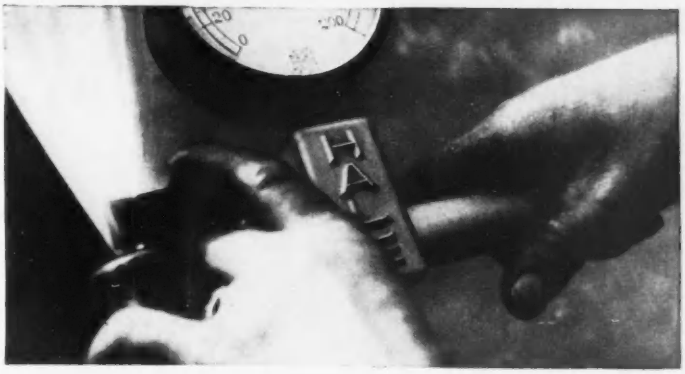
(1) Heat (which is present in other explosions, as the familiar injuries known as "flash burns" on warships illustrate, but ordinarily not at high enough diffused temperatures to burn a man or set fire to combustible objects at any considerable distance from the explosion).

(2) Radiation (similar to X-rays or to that from radiation).

(3) Blast or pressure (as from a demolition bomb).

Ordinary burning or explosion is a reaction in which energy is released during the *rearrangement* of the atoms of the explosive material. In an atomic reaction the *identity* of the atoms, not simply their arrangement, is changed.

At the time of the explosion, then, energy was given off in the forms of light, heat, gamma radiation, and pressure. Thus the light, heat, and gamma radiation reached the target first, followed by shock and sound and the high winds of the blast.



For VOLUME and PRESSURE

Specify HALE

It's what comes out at the nozzle that counts.

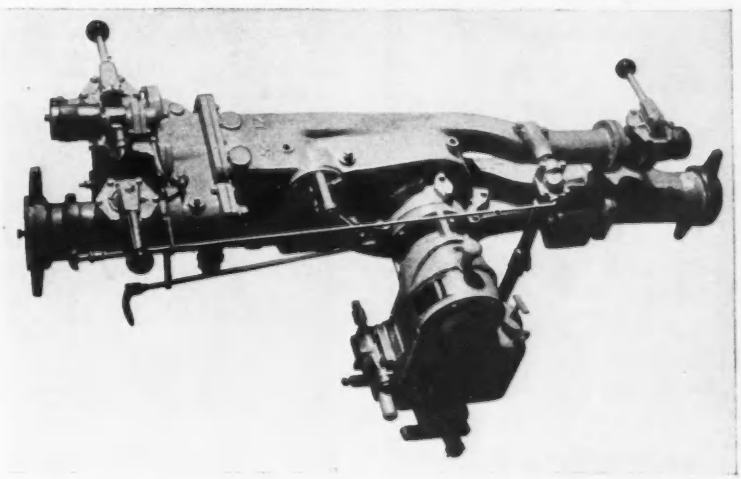
Firefighters who have used Hale Fire Pumps have learned through first-hand experience to appreciate their flexible range of performance and high efficiency.

They know they can depend on HALE for the right volume and the right pressure to fit a wide range of tough fire-fighting conditions.

Make sure of this same flexibility and dependability in your next piece of apparatus by insisting on a Hale Fire Pump.

Write today for up-to-date information on Hale Fire Pumps . . . built in all Standard Capacities.

Below—Hale Type ZL Multi-Service Centrifugal Pump



HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

6 of 70 MASTERLIGHTS

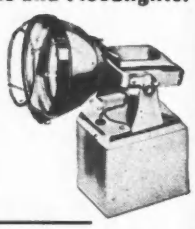
MASTER★LIGHTS FOR EVERY NEED

The best in colored oscillating lights for your motor equipment.

Type 06 ←
Clears Both Sides of Street

Featherweight, Mile Range, Rechargeable Hand Searchlights and Floodlights.

Type WS →
Uses Small Rechargeable Battery Mile Range

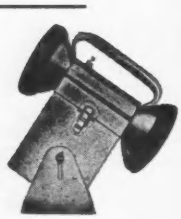


Type Dul ←
Emergency Floodlight For Theatres, Road Houses, etc.

Types F5 and Super-6 →
Dry and Rechargeable Units. ¾ Mile Range

Type T ←
Roof mounted Officers Searchlight 360°

Type T&T →
Two-Way. Hand and Red Warning Light



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National Fire Protection Association, International

Associate Membership

VOLUNTEER FIRE COMPANY SECTION ($10 annual dues) Eligible:

(1) all bona fide volunteer fire organizations in any community.

(2) all fire departments and companies in communities of less than 25,000 population.

(3) all industrial fire brigades.

Member volunteer fire companies receive ten copies of FIREMEN magazine each month, mailed to the homes of individual firemen. Beyond the ten, additional copies of FIREMEN cost $1 per year.

Volunteer Fire Company Section members, receive at their headquarters, one copy of all publications sent to NFPA associate members.

ASSOCIATE MEMBERSHIP ($10 annual dues) Eligible: Individual fire department officers, firemen, and others interested in fire safety. NFPA associate members in the fire service receive: one copy of FIREMEN magazine monthly, the NFPA **Quarterly,** the monthly **News Letter,** technical standards, popular bulletins and posters.

All associate members have one vote in Association affairs.

NEW MEMBERS

Ashfork Fire Dept., Ashfork, Ariz.
Richton Park Volunteer Fire Dept., Richton Park, Ill.
West Chicago Fire Dept., West Chicago, Ill.
Rose Rown Volunteer Fire Dept., St. Paul 8, Minn.
Finderne Engine Co. No. 1, Finderne, N. J.
Huntingdon Valley Fire Co. No. 1, Huntingdon Valley, Pa.
Lititz Fire Co. No. 1, Lititz, Pa.
Oakmont Volunteer Fire Dept., Oakmont, Pa.

50th Anniversary for Texas Fire Department

THE Coleman, Texas, Fire Department (NFPA member) has seen fifty years of fire fighting since its bucket brigade days in 1896. The so-called "cleanest" fire department in the state held open house and company demonstrations last June to celebrate its golden anniversary.

The first fire chief of the Coleman Fire Department, R. S. Johnson, recalled that the first equipment the new department received were two 100-foot lengths of hose. In those days, the person who discovered a fire shot off a gun, and the alarm went down the line until the fire company heard the shots. Then the townspeople pitched in and formed a bucket brigade.

Today the department has three trucks, the oldest purchased in 1928. A Reo booster was added in 1930, and a pumper in 1940. A combination booster-pumper has been ordered to supplement the existing apparatus.

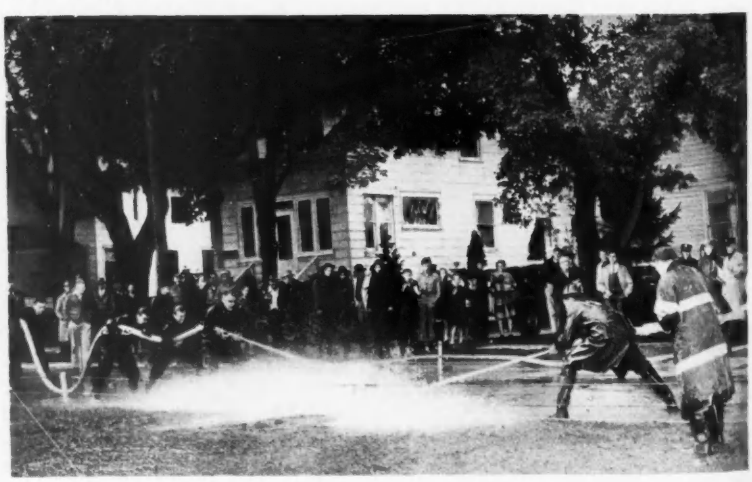
Coleman firemen had the first fire ground communication system for a small fire department when they added a walkie-talkie radio to their equipment several years ago (*Volunteer Firemen*, October 1944).

In Winnetka, Illinois . . .

THE WINNETKA, ILL., FIRE DEPARTMENT is going to make sure that the village's fire extinguishers are always in working order. The department made a formal announcement to the effect that it stands ready to inspect hand fire extinguishers of the residents if they are brought to fire headquarters. Rates for recharging are to cover the cost of materials.

This item was sent the Editor by Alvah Small, president of Underwriters' Laboratories and past president of the NFPA, who lives in Winnetka.

This is the way they pull a water fight in Illinois. The photograph was taken at the convention of the Lake County, Ill., Firemen's Association held at Libertyville last summer. In the picture Grayslake and Fox Lake teams (both NFPA members) are holding the keg on the line. Fox Lake was first place winner in the series of competitions.



Kidde *announces*

still another Fire-fighting Advance!

We've packed in an extra pound of carbon dioxide, compared with the Model 4

—We've knocked 2 1/2 pounds off the average charged weight!

The NEW Model 5 Extinguisher

And . . . this harder-hitting, lighter-weight extinguisher *costs no more* than the Model 4 it replaces!

The new Kidde Model 5 *adds* the advantage of increased flame-killing power . . . *retains* the features that led to the widespread popularity of the Model 4. Such features as:

Simple trigger control . . . just aim at the fire, pull the trigger. Fast attack on incipient fires in flammable liquids or electrical equipment. *Complete* freedom from extinguishing-agent damage . . . the dry, clean carbon dioxide cannot corrode metals, harm materials, contaminate liquids. No after-fire mess to clean up.

Get the full facts on the Kidde Model 5 . . . *today!*

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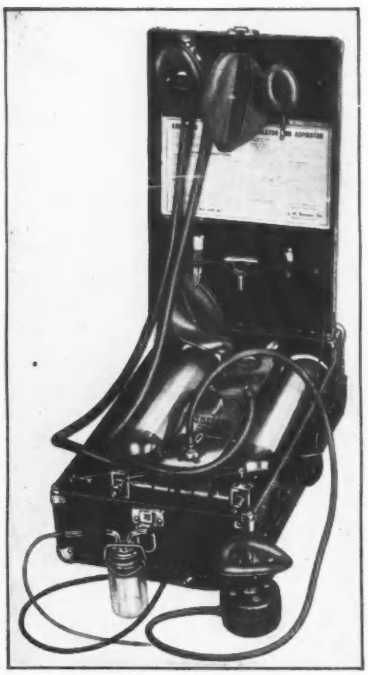

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Is the simplest to operate because everything involved in resuscitation, aspiration and inhalation is controlled by a single lever.

It is completely automatic, adjusting itself to any lung capacity.

Its effectiveness, especially in critical cases, has been demonstrated in the research laboratory and by hundreds of fire departments all over the country.

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MANUFACTURERS' ANNOUNCEMENTS

Kidde Introduces New Extinguisher

A portable fire extinguisher containing $2\frac{1}{2}$ pounds of fire-killing carbon dioxide in a new light-weight cylinder is announced by Walter Kidde & Company, Inc., of Belleville, N. J. The new model portable replaces the old 2-pound type, increasing the carbon dioxide content by 25% while decreasing the overall weight by $21\frac{1}{2}$%.

The new Kidde extinguisher is designed for small fires in flammable liquids and electrical equipment. It combines the trigger control valve with reduced cylinder weight to provide easier handling and more simple operation than ever before. Increased carbon dioxide content will give added protection to small-hazard areas. With more carbon dioxide available in the new model, fires can be attacked with a greater safety factor. The new steel cylinder developed by Kidde engineers maintains the same high strength and durability of the old cylinder with a sizable reduction in weight. The old cylinder weighed $8\frac{1}{4}$ pounds whereas the new model weighs but $4\frac{1}{2}$ pounds. Other hand portables are available in 4-, 10-, 15-, and 20-pound sizes; and wheeled portables in 50-,75-, and 100-pound sizes. All sizes of Kidde portables are approved by both the Underwriters' and Factory Mutual Laboratories for flammable liquid and electrical fires.

New Model Fire Engine by F.W.D.

Details of a new 750-g.p.m. triple combination fire fighter were released recently by The Four Wheel Drive Auto Co., of Clintonville, Wis. The new Model F75T employs the FWD four-wheel-drive principle with center differential which imparts a balanced tractive effort to all wheels. The manufacturer states that with four-wheel-drive, the apparatus is able to travel faster

and safer on ice and can plow its way to a fire through mud and snow. In rural fire fighting it can be driven across country, over plowed fields directly to a creek or other water source.

Powered with a 6-cylinder 190 B.H.P. FWD engine, the Model F75T has a wheelbase of 160 inches. It is equipped with an FWD centrifugal 750-g.p.m. two stage series-parallel pump. The new open type all steel body has a capacity of more than 1,200 feet of $2\frac{1}{2}$-inch hose and 400 feet of $1\frac{1}{2}$-inch hose. The 150-gallon booster tank is located in the hose body. The booster hose reel has a capacity of 200 feet.

"U.S." ELECTRIC PLANTS

These rugged 1,500 watt units were designed to fire department specifications — built to meet every need. Dependable, quick-starting, 4-cycle engine. Positive lubrication. Automatic voltage regulation. No fussing to mix gasoline and oil. Compact — an easy load for two men.

Larger and smaller sizes are also available
Write for information

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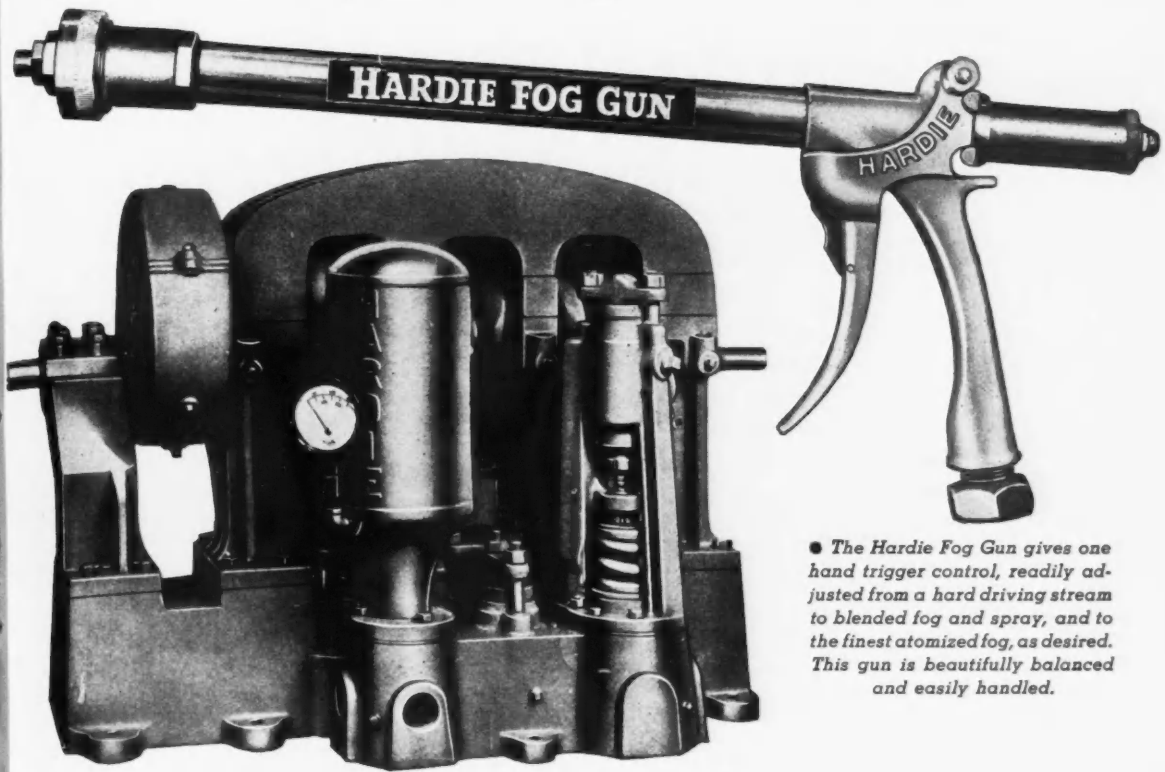
Get the Most Out of Fog Fire Fighting with Hardie Pumps and Guns



● *The Hardie Fog Gun gives one hand trigger control, readily adjusted from a hard driving stream to blended fog and spray, and to the finest atomized fog, as desired. This gun is beautifully balanced and easily handled.*

● Hardie powerful, 3 cylinder, piston type pumps are available in sizes delivering 60 GPM and 35 GPM respectively at 800 P.S.I. at the nozzle.

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● Leading manufacturers of Fog Fire Fighter trucks, equip their units with Hardie pumps and guns. Specify Hardie when you buy new equipment or convert an old unit.

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High Pressure **PUMPS AND FOG GUNS**

for Fog Fire Fighters

NICE STOPS

BY FMC HIGH-PRESSURE FOG FIRE FIGHTER

THIS FULLY-LOADED *gasoline truck blazed furiously. Nearest available fire equipment failed to stop the fire. It looked like 7 hours of blocked highway traffic, until...*

A SINGLE FMC UNIT *arrived and brought all flames under control in a* few minutes! *Thanks to the FMC High-Pressure Fog Fire Fighter, traffic on this main highway was resumed many hours earlier than otherwise possible. Proof again—FMC equipment and technique* fight fire faster.

IN THIS HOUSE, *the lower floor was saved by FMC High-Pressure Fog after the upper floor was completely ablaze.*

FMC EQUIPMENT *travelled 12 miles, found this upper story a flaming inferno, but scored another ace for quick extinguishment.*

THIS WAREHOUSE FIRE *was cut off immediately by FMC High-Pressure Fog. For fast fire fighting, FMC equipment is setting new records daily. The facts are yours for the asking—investigate.*

With the FMC unit, you get 850 lbs. pump pressure, 600 lbs. (or more) gun pressure. FMC equipment and technique give amazing fast attack with quick extinguishment and minimum water damage. The FMC High-Pressure Fog Fire Fighter is Underwriters' Laboratories approved.

Recently delivered to North Girard Fire Co., Girard, Pa., this FMC unit carries 430 gallons of water, two hose lines, two guns and complete equipment.

FMC *Original* **HIGH-PRESSURE FOG FIRE FIGHTER**

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY CORPORATION

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Generates its own oxygen as you breathe—in the amounts you need—giving you one hour's protection in unbreathable air, using a replaceable chemical canister! Weighs only 13½ lbs. complete. No cylinders, high-pressure valves or fittings. Fog-free lenses. Simple to use. Proved by Navy battle service all through the war! Write now for Bulletin BM-8, and an actual demonstration.

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MASK

Easy to use as a gas mask—just put it on, open a valve, and breathe! Refillable cylinder supplies oxygen or air to wearer at a rate varied to meet breathing requirements through positive demand-type regulator. One-half to one-hour protection; no chance of breathing impure air; anyone can use it without special training. Full details in Bulletin BM-7. Write for your copy today!

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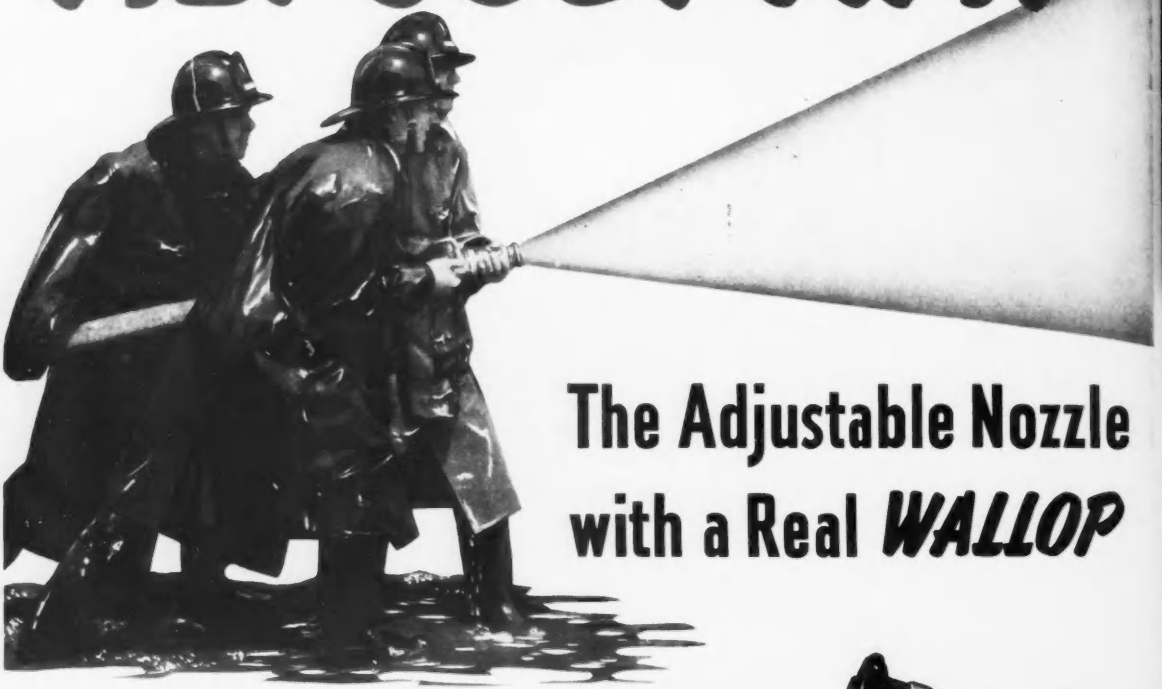

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SPEED PLUS *PROTECTION*

Rapid fire extinguishment is essential. With Alfcospray in operation fire quickly dies down making it easier to approach and finish the job.

The Alfcospray may be operated from straight stream to full curtain. In a straight stream it is as effective as a standard straight bore nozzle of equal capacity. In full curtain it offers protection from heat and flame. It knocks down heavy smoke, dissipates fumes. Now is the time to buy, *before* the fire occurs.

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There is an Alfcospray Model E Nozzle available for all sizes of hose from ½" to 2½", to suit your requirements.

A TWIST OF THE WRIST GIVES POSITIVE INSTANT ADJUSTMENT